

REMARKS

Claims 1, and 14 stand rejected under 35 USC §112, second paragraph. Claims 1, 3-8, 11, 12, 14, 15, 17, and 18 stand rejected under 35 USC §101. Claims 1, 5, 6, 8, 11-15, 17 and 18 stand rejected under 35 USC §102(b) as being anticipated by Brownbridge et al., Oracle Discoverer 4i Plus. Claims 3 and 4 stands rejected under 35 USC §103(a) as being unpatentable over Brownbridge in view of Ramasamy et al., U.S. patent 6,944,614. Claim 7 stands rejected under 35 USC §103(a) as being unpatentable over Brownbridge in view of Rankins et al., Microsoft SQL Server 2000 unleashed, Second Edition.

Claims 1, 5, 6, 7, 14, 15, 17 and 18 have been amended to more clearly state the invention and to clearly distinguish over the references of record to accommodate the Examiner's rejections. Claims 11 and 12 have been canceled. As amended, each of the independent claims 1, and 14 is believed to accommodate the Examiner's rejection under 35 USC §112, second paragraph, and more clearly define the invention.

Reconsideration of independent claims 1, and 14, as amended, and withdrawal of the rejection under 35 USC §112, second paragraph is respectfully requested.

Claim 1 has been amended to recite a method for implementing enhanced query governor functions using a computer system for providing enhanced performance for said computer system, said computer system performing said method comprising the steps of. Claim 14 has been amended also to recite a computer-readable medium

encoded with a computer program product, and further to recite said computer-readable medium consisting one of a floppy disk, a hard disk, a high capacity read only memory in the form of an optically read compact disk or CD-ROM, a DVD, a tape, a read only memory (ROM), and a random access memory (RAM), to more clearly recite statutory subject matter. Dependent claims 15, and 17-18 have been amended to conform to amended independent claim 14.

Reconsideration and withdrawal of the rejections under 35 USC §101, is respectfully requested.

Applicants have amended claims 1, 5, 6, 7, 14, 15, 17 and 18 and canceled claims 11 and 12 from further consideration in this application. Applicants are not conceding in this application that those claims are not patentable over the art cited by the Examiner, as the present claim amendments and cancellations are only for facilitating expeditious prosecution of allowable subject matter to accommodate the Examiner's rejections. Applicants respectfully reserve the right to pursue these and other claims in one or more continuations and/or divisional patent applications.

As amended, each of the independent claims 1, and 14 is believed to clearly distinguish over the references of record including Brownbridge et al., Oracle Discoverer 4i Plus. Reconsideration and allowance of each of the pending claims 1, 3-8, 14-15, and 17-18, as amended, is respectfully requested.

Brownbridge et al., Oracle Discoverer 4i Plus discloses a program including at pages 9 and 10, options for Query Governor Data including a warning if predicted query time exceeds a set time, and to prevent a query from running longer

than a set time. At page 16-17, automatic querying is described.

Ramasamy et al., U.S. patent 6,944,614 discloses a method, apparatus, article of manufacture, and a memory structure for monitoring an executed query comprising at least one execution thread. The method comprises the steps of executing the query; and while executing the query, storing an execution trace record for each execution thread in at least one execution log file. The execution trace record comprises execution trace information including a thread ID and a time stamp for the execution thread. The execution trace information can be recalled from the execution log file and presented to a user after execution of the query to allow post mortem analysis of the query. The apparatus comprises a data server for executing the execution thread and for storing an execution trace record for the executed execution thread, the execution trace record having execution trace information including a thread identifier and a time stamp; a query coordinator for storing an execution plan having a time stamp and for retrieving and synchronizing the execution trace record and the execution plan; and a client process for displaying the retrieved execution trace information to a user after execution of the query. FIGS. 3A-3C present an example of an SQL query, an associated tree of rational operators, and an associated access plan. FIG. 6 shows an example of an operator tree corresponding to the query shown in FIG. 3A. FIG. 7 presents an example of the operator tree depicted in FIG. 6 illustrating the associated tree descriptors.

Rankins et al., Microsoft SQL Server 2000 unleashed, Second Edition, discloses features of the Microsoft SQL Server 2000 product, and describes returning

procedure status starting at page 16 and provides a table of SQL server return codes at pages 17-18.

Reconsideration and allowance of each of the pending claims 1, 3-8, 14-15, and 17-18, as amended, is respectfully requested.

The present invention enables the database user to be allowed to modify multiple query attributes including multiple executing components of a query. A query can be broken down into multiple query execution components, including data retrieval, trigger processing, and user defined function (UDF) processing, and with each of these query execution components having an individual time out value. Execution of the query is halted responsive to an expired time out value for the query, the requested monitor including at least one of a user defined function (UDF) processing and a trigger processing.

As amended, each of the independent claims 1, and 14 is believed to more clearly define the invention and to be patentable over the records of record including Brownbridge.

Independent claims 1 and 14, as amended, recites a method and computer-recording medium encoding a computer program produce for implementing enhanced query governor functions. Independent claims 1 and 14, as amended, recites the steps of

monitoring events,

responsive to an event to modify attributes, performing a modify attributes routine; said modify attributes routine including checking for a monitor being requested;

and responsive to a monitor being requested, setting a timeout value for the requested monitor; the requested monitor including a query execution component of at least one of data retrieval, a user defined function (UDF) processing and a trigger processing;

responsive to an event to execute query, performing an execute query routine; said execute query routine including:

checking for a timeout value for the query and checking for a timeout value of each requested monitor including the query data retrieval, said user defined function (UDF) processing and said trigger processing;

responsive to identifying a timeout value for the query data retrieval, resetting an execution time for the query;

starting a monitor for an identified timeout value for the query data retrieval and starting a monitor for each identified timeout value of each requested monitor including said user defined function (UDF) processing and said trigger processing;

starting the execution of the query;

monitoring the execution of predefined events during the execution of the query; said predefined events including a begin or end of processing of each requested monitor including said trigger processing and said user defined function (UDF) processing;

periodically checking execution status of the query;

responsive to identifying the query is executing, checking for an expired timeout value for the query data retrieval and for each requested monitor including said user defined function (UDF) processing and said trigger processing; and

halting the execution of the query responsive to an identified expired timeout value.

Applicants submit that as amended, each of the independent claims 1 and 14 is patentable over the references of record including Brownbridge.

Brownbridge, like some other known query governors enable a database administrator and user of the database to have queries time out if the queries take too long. In this case queries are prevented from taking up too much system resources. Current technology, such as Brownbridge allows the database user to time out a query based upon execution time but does take into account multiple aspects or the breakdown of a query into executing components.

As now expressly recited in independent claims 1 and 14, as amended, the requested monitor including a query execution component of at least one of data retrieval, a user defined function (UDF) processing and a trigger processing. The references of record, including Brownbridge, do not teach, enable, or suggest that requested monitor including such query execution component, nor the step of monitoring the execution of predefined events during the execution of the query; said predefined events including a begin or end of processing of each requested monitor including said trigger processing and said user defined function (UDF) processing, as taught and recited in each of the independent claims 1 and 14, as amended.

The references of record, including Brownbridge, do not teach, enable, or suggest the step of starting a monitor for an identified timeout value for the query data retrieval and starting a monitor for each identified timeout value of each requested

monitor including said user defined function (UDF) processing and said trigger processing, as taught and recited in each of the independent claims 1 and 14, as amended.

The references of record, including Brownbridge, do not teach, enable, or suggest the step responsive to identifying the query is executing, checking for an expired timeout value for the query data retrieval and for each requested monitor including said user defined function (UDF) processing and said trigger processing, as taught and recited in each of the independent claims 1 and 14, as amended.

The references of record, including Brownbridge, do not teach, enable, or suggest the step of halting the execution of the query responsive to an identified expired timeout value, as taught and recited in each of the independent claims 1 and 14, as amended.

Thus, independent claims 1 and 14, as amended, are patentable.

Anticipation under § 102 can be found only when the reference discloses exactly what is claimed; where there are differences between the reference disclosure and the claim, the rejection must be based on § 103 which takes differences into account. Tyler Refrigeration v. Kysor Industrial Corp., 777 F.2d 687, 689, 227 U.S.P.Q. 845 846-47 (Fed. Cir. 1985). It must be shown that the reference contains all of the elements of the claims, and that the elements are arranged in the same way to achieve the same result which is asserted to be an inventive function. The references of record, including Brownbridge, do not teach, enable, or suggest the steps as now recited in each of the independent claims 1 and 14, as amended. The prior art including

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Brownbridge fails to teach the use of query components including data retrieval, trigger processing, and user defined function (UDF) processing, and with each having an individual time out value.

Thus, each of the independent claims 1 and 14, as amended, is patentable.

Dependent claims 3-8, 15, and 17-18 respectively depend from patentable claims 1, and 14, further defining the invention. Each of the dependent claims 3-8, 12, 15, and 17-18, as amended, is likewise patentable.

Applicants have reviewed all the art of record, and respectfully submit that the claimed invention is patentable over all the art of record, including the references not relied upon by the Examiner for the rejection of the pending claims.

It is believed that the present application is now in condition for allowance and allowance of each of the pending claims 1, 3-8, 14-15, and 17-18, as amended, is respectfully requested. Prompt and favorable reconsideration is respectfully requested.

If the Examiner upon considering this amendment should find that a telephone interview would be helpful in expediting allowance of the present application, the Examiner is respectfully urged to call the applicants' attorney at the number listed below.

Respectfully submitted,

S-signature by

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